

AMENDMENTS

In the Claims:

1. (Currently Amended) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate, said method comprising:

wherein producing a degenerate biopolymer feature location on said surface of said substrate one or more of said feature locations comprises degenerate biopolymers comprising nucleotides, said by a method comprising providing a mixture of different biopolymer subunit precursors to said feature location in at least one, in each round of multiple rounds of subunit additions, providing one or more biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, wherein for one or more feature locations comprising said degenerate biopolymers, said biopolymer subunit precursors comprise a mixture of biopolymer subunit precursors for forming said degenerate biopolymers at said feature location.

2. (Previously Presented) A method according to claim 1 wherein said biopolymers are polynucleotides.

3. (Currently Amended) A method according to claim 1 wherein said degenerate biopolymer feature comprises degenerate biopolymers that comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

4. (Currently Amended) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate, said method comprising:

wherein producing a degenerate biopolymer feature location on said surface of said substrate one or more of said feature locations comprises degenerate biopolymers comprising nucleotides, said by a method comprising:

providing a mixture of different biopolymer subunit precursors to said feature location in at least one, in each round of multiple rounds of subunit additions, ~~providing one or more biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, wherein, for one or more feature locations comprising said degenerate biopolymers, said biopolymer subunit precursors comprise a mixture of said biopolymer subunit precursors for forming said degenerate biopolymers at said feature location,~~ each round of subunit additions comprising:

- (a) dispensing from a dispensing system said biopolymer subunit precursors to said discrete sites,
- (b) dispensing activator to said discrete sites, and
- (c) repeating steps (a) - (b).

5. (Previously Presented) A method according to claim 4 wherein said biopolymers are polynucleotides.

6. (Currently Amended) A method according to claim 4 wherein said degenerate biopolymer feature comprises degenerate biopolymers that comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

7. (Original) A method according to claim 4 wherein said biopolymers are oligonucleotides.

8. (Original) A method according to claim 4 wherein said dispensing system comprises at least one droplet dispensing device.

9. (Original) A method according to claim 4, which is a computer based method wherein steps (a) through (c) are carried out under computer control.

Claims 10-32 (cancelled).

33. (Currently Amended) A method for synthesizing a plurality of biopolymers comprising nucleotides at predetermined feature locations on a surface of a substrate ~~wherein one or more of said feature locations comprise degenerate biopolymers comprising nucleotides~~, said method comprising:

producing a degenerate biopolymer feature location on said surface of said substrate by a method in each round of multiple rounds of subunit additions, providing one or more biopolymer subunit precursors at each of multiple feature locations on said surface to form said plurality of said biopolymers on said surface, each round of subunit additions comprising:

(a) dispensing from a dispensing system in at least one round of multiple rounds of subunit additions ~~said biopolymer subunit precursors to said discrete sites wherein, for one or more of said feature locations comprising said degenerate biopolymers~~, a mixture comprising a predetermined ratio of ~~said different~~ biopolymer subunit precursors for forming said degenerate biopolymers ~~is dispensed in a droplet manner at each of said feature locations comprising said degenerate biopolymers~~,

(b) dispensing activator to said discrete sites, and

(c) repeating steps (a) – (b) to form said plurality of biopolymers comprising nucleotides at predetermined feature locations on said surface.

34. (Previously presented) A method according to Claim 33 wherein said biopolymers are polynucleotides.

35. (Currently Amended) A method according to Claim 33 wherein said degenerate biopolymer feature comprises degenerate biopolymers that comprise a contiguous stretch of 1 to 5 degenerate nucleotides.

36. (Currently Amended) A method according to Claim 33 wherein said biopolymers are oligonucleotides.

37. (Previously presented) A method according to Claim 33 wherein said dispensing system comprises at least one droplet dispensing device.

38. (Previously presented) A method according to Claim 33, which is a computer based method wherein steps (a) through (c) are carried out under computer control.